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RES2019-15 Autonomous Truck Mounted Attenuator (TMA) Pilot

Purpose of the Project

The main objective of the research project is to provide a report with evaluations to TDOT on the performance of autonomous truck mounted attenuator (ATMA) system(s), based on previous relevant research projects and on actual testing of the equipment during a demonstration pilot. The report's goal is to produce supportive analysis to better understand the applicability of the autonomous system to enhance safety on work zones in Tennessee.

Scope and Significance

The scope of work includes initially the research of autonomous truck mounted attenuator (ATMA) systems that are currently available in the market. The research group will identify additional available applicable technologies in autonomous vehicles and in coordination with TDOT will develop the criteria for evaluating and selecting the system to be tested. The selected system will be tested during a demonstration pilot based on predetermined scenarios. The testing process will be scientifically documented. A final report will be produced with evaluations to TDOT on system accuracy, ease of use, cost effectiveness, life cycle, additional applicability for TDOT and any additional relevant findings.

The primary benefit of an ATMA system is the removal of the driver of a truck mounted attenuator from harm's way; including potential death or lifelong injury. In addition, it has the potential to save time, money and improve the quality of work zones

Expected Outcome

The findings from this proposed research will facilitate TDOT's evaluation for potential adoption of the Autonomous Truck Mounted Attenuator (ATMA) system enhancing the agency commitment to prevent work zone deaths and serious injuries and to be in the national forefront of work zone safety and autonomous vehicle applications.
The testing of the equipment will not only provide a hands-on examination of current safety technology but will also produce supportive analysis to TDOT to better understand the applicability of the ATMA system to enhance safety for work zone personnel and potentially for other applications.

Time Period

The time period for the project is from January 2019 to November 2020.

Contact Information

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